

Abstract

CONSTRUCTION OF STATIC STRUCTURES FOR GAS TURBINE ENGINES

Porous or foam metal is utilized in certain static gas turbine engine
5 components that includes the main body of the metal and a coating such as
TBC or ceramics. Because of the porosity of the metal the coating bonds to
the interstices and hence, eliminates peeling. The outer air seal for the turbine
and the vanes of the stator vane assembly are examples of components
constructed in accordance with this invention. Cooling is obtained by
10 providing inlet cooling holes into the porous material and exit cooling holes
in the coating so as to cool the component and apply a surface of cooling air
adjacent to the exterior surface of the coating.